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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,690	04/11/2006	Jiang Cheng	CN 020039	8970
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EXAMINER				
CASCA, FRED A				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/540,690

**Applicant(s)**

CHENG ET AL.

**Examiner**

FRED A. CASCA

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_

## DETAILED ACTION

### *Drawings*

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Claim Rejections –35 U.S.C. 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 7-9, 14-15, 21-23, 28, 29, 35-37 and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Mashinsky et al (US 2003/0050070 A1).

Referring to claim 1, Mashinsky discloses a method for radio RF resources allocation in multi-standard wireless communication systems (Fig. 2 and Par. 37), comprising:

(a) detecting a plurality of received signals from a uplink (Par. 39, "spectrum management layer 22", "using requests"), wherein said signals contain information on the types of the different wireless communication schemes which are requested to access (Par 39, "request may have different characteristics associated with it"); and

(b) allocating the radio RF resources shared by said different communications schemes according to said detected information (Fig. 3-10, Par. 38-39, 41-42, "management layer 22 that is responsible for determining available network channels for a given transmission and for allocating channels to wireless devices").

Referring to claim 7, Mashinsky discloses the method of claim 1, and further disclose step b includes steps:

b1, judging whether there are RF resources available for the requests for accessing said different wireless communication schemes; and

b2, allocating said available RF resources to said requests, if there are RF resources available for said requests (Fig. 3-5 and 9-10, Par. 38-39 and 41-42).

Referring to claim 8, Mashinsky discloses the method of claim 1, wherein step (b) further includes:

(bl) pre-allocating said RF resources to a specific communication scheme (Par. 37 and 39, "GPRS ... CDPD");

(b2) judging whether there are RF resources available for the requests for accessing the different wireless communication schemes, if the different wireless communication schemes are not the specific communication scheme (Par. 38- 39, "availability"); and

(b3) allocating said available RF resources to said requests, if there are RF resources available for said requests (par. 38-39, "determining available network channels ... allocating channels").

Referring to claim 9, Mashinsky discloses the method of claim 7, wherein step (b2) and (b3) are executed in following condition:

subscribers send said connection requests for accessing said different wireless communication schemes (Par. 39, "mode", "band").

Referring to claims 14 and 28, Mashinsky discloses the method of claims 1 and 15, wherein said wireless communication schemes include at least two of following: IS-95, CDMA, GSM, TSM, GPRS, TD-SCDMA, W-CDMA cdma 2000 and WLAN (Par. 37).

Claim 15 recites features analogous to the features of claim 1, thus, Mashinsky discloses all elements of claim 15 (please see the rejection of claim 1 above).

Claims 21-23 recite features analogous to the features of claims 7-9. Thus, they are rejected for the same reasons that claims 7-9 were rejected.

Claims 29, 35, 36, 37 and 42 recite features analogous to the features of claims 1, 7, 8, 9 and 14 respectively. Thus, Mashinsky discloses all elements of claims 29, 35, 36, 37 and 42.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-13, 25-27 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mashinsky et al (US 2003/0050070 A1)

Referring to claim 11, Mashinsky discloses the method of claim 7.

Mashinsky does not specifically disclose wherein step (b3) further includes:

(i) judging whether there are RF carrier available for said requests, if there are no RF resources available for said requests for accessing said wireless communication schemes; and

(ii) allocating said available RF carrier to said wireless communication schemes, if there are RF carriers available for said requests, and allocating the corresponding RF resources to said requests.

However, in different embodiment, Mashinsky discloses determining availability of network channels for a given transmission and for allocating channels to wireless devices.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify Mashinsky's availability scheme in the format claimed by applicant for the purpose of providing an efficient communication system.

Referring to claim 12, Mashinsky discloses the method of claim 11, and inherently disclose when the communications employing said wireless communication schemes ends, said RF carriers allocated to said requests are released (Mashinsky, Par. 37 and 38-41).

Referring to claim 13, Mashinsky discloses the method of claim 11, and inherently discloses if there are no RF carriers available for said requests, said requests are rejected Mashinsky, Par. 37 and 38-41).

Claims 25-27 recite features analogous to the features of claims 11-13. Thus, they are rejected for the same reasons that claims 11-13 are rejected.

Claims 39-41 recite features analogous to the features of claims 11-13. Thus, they are rejected for the same reasons that claims 11-13 are rejected.

6. Claims 2-6, 16-20 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mashinsky et al (US 2003/0050070 A1) in view of Strich et al (US 2002/0054580 A1).

Referring to claim 2, Mashinsky discloses the method of claim 1.

Mashinsky does not specifically disclose carrying out a statistic of the information on the requests for accessing each of said different wireless communication schemes in a set interval; and allocating said RF resources shared by said different wireless communication schemes according to said statistic of the set interval, as claimed.

Strich discloses communication resource allocation based on statistics (Par. 47).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the method of Mashinsky in the format claimed by applicant by incorporating the teachings of Strich, for the purpose of providing an efficient communication system.



Referring to claim 3, the combination of Mashinsky/Strich discloses the method of claim 2, and further discloses information on the requests for accessing each of said different wireless communication schemes includes the number of the requests for accessing each of said different wireless communication schemes (Mashinsky, Par. 38-40).

Referring to claim 4, the combination of Mashinsky/Strich discloses the method of claim 3, and further discloses the allocation of said RF resources is realized by calculating the ratio of the number of the requests for accessing each of said different wireless communication schemes (Mashinsky, Par. 39).

Referring to claim 5, the combination of Mashinsky/Strich discloses the method of claim 4, and further discloses said statistic is achieved by carrying out a statistic of said information on the requests for accessing each of said different wireless communication schemes within the set whole interval (Mashinsky, Par. 38-39, and Strich, Par. 47).

Referring to claim 6, the combination of Mashinsky/Strich discloses the method of 2, and further discloses statistic is achieved by carrying out a statistic of said information on the requests for accessing each of said different wireless communication schemes within rush hours of the set interval (Mashinsky, Par 39 and Strich, Par. 47).

Claims 16-20 recite features analogous to the features of claims 2-6. Thus, the combination of Mashinsky/Strich discloses all elements of claims 16-20.

Claims 30-34 recite features analogous to the features of claims 2-6. Thus, the combination of Mashinsky/Strich discloses all elements of claims 30-34.

7. Claims 10, 24 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mashinsky et al (US 2003/0050070 A1) in view of well known prior art (MPEP 2144.03).

Referring to claim 10, Mashinsky discloses the method of claim 7. Mashinsky does not specifically disclose subscribers which carry out cell handover send handover requests for accessing different wireless communication schemes, in the format claimed by applicant.

The examiner takes official notice of the fact that handover request is well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Mashinsky in the format claimed, for the purpose of providing an efficient communication system.

Claims 24 and 38 recite features analogous to the features of claim 10. Thus claims 24 and 38 are rejected for the same reasons/arguments that were used in the rejection of claim 10.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Harper, can be reached at (571) 272-7605. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/VINCENT P. HARPER/  
Supervisory Patent Examiner, Art Unit 2617